

WHAT IS CLAIMED IS:

1. A generator set assembly comprising:

an alternator;

an engine coupled to the alternator and capable of transmitting rotational energy to the alternator;

5 a base; and

a plurality of engine mounting components positioned between the base and the engine,

wherein at least a first of the engine mounting components includes:

10 a first rigid portion capable of being fixedly coupled to the engine;

a second rigid portion capable of being fixedly coupled to the base component;

15 a flexible intermediate portion coupled between the first and second rigid portions that allows relative movement of the first and second rigid portions to occur in response to expansion and contraction of the engine during operation of the engine; and

20 a further component extending between the first and second rigid portions through the flexible intermediate portion,

25 wherein the further component is capable of limiting relative movement of the first and second rigid portions.

2. The generator set assembly of claim 2,

wherein at least a second of the mounting components is positioned at a rear end of the engine proximate to the alternator, and wherein the first mounting component is  
5 positioned at a front end of the engine.

3. The generator set assembly of claim 2,  
wherein a third of the mounting components is positioned  
at the rear end of the engine and a fourth of the mounting  
components is positioned at the front end of the engine.

4. The generator set assembly of claim 3,  
wherein the base includes a pair of skid rails, wherein  
the first and second mounting components are mounted upon the  
first skid rail, and wherein the third and fourth mounting  
5 components are mounted upon the second skid rail.

5. The generator set assembly of claim 4, wherein the base  
further includes a foundation, and wherein the skid rails are  
mounted upon the foundation by way of additional mounting  
components selected from the group consisting of rigid  
5 mounting components, rubberized mounting components,  
elastomeric mounting components, and spring-type mounting  
components.

6. The generator set assembly of claim 5, wherein at least  
one of the mounting components provides at least some  
reduction in an amount of vibrations transmitted from the  
engine to at least a portion of the base.

7. The generator set assembly of claim 1, wherein the  
intermediate portion includes a first channel portion, wherein  
the second rigid portion includes a second channel portion,  
and wherein the first and second channel portions are at least  
5 partly aligned with one another to form an overall channel,  
and wherein the further component extends through the overall  
channel.

8. The generator set assembly of claim 7, wherein the  
further component has an outer diameter that is less than an  
inner diameter of the overall channel, so that a limited

amount of relative shearing movement of the first and second  
5 rigid portions can be accommodated by the flexible  
intermediate portion, the limited amount being determined at  
least in part by a difference between the inner and outer  
diameters.

9. The generator set assembly of claim 8, wherein the  
further component includes a bolt and a sleeve, wherein the  
outer diameter is that of the sleeve, wherein positioned  
between the sleeve and the first rigid portion is a shoulder  
5 of the intermediate flexible portion that extends inward  
toward the bolt beyond the inner diameter, and wherein the  
sleeve assists in maintaining the intermediate flexible  
portion in position adjacent to the first rigid portion.

10. The generator set assembly of claim 9, wherein the  
intermediate flexible portion includes a first rigid plate and  
a second rigid plate that are fixed in position on first and  
second sides of a rubberized portion in between the rubberized  
5 portion and the first and second rigid portions, respectively,  
and wherein the second rigid plate includes a further channel  
portion that is part of the first channel portion.

11. The generator set assembly of claim 10, wherein the  
further component includes a threaded bolt and a threaded nut  
that is positioned onto the bolt adjacent to the first rigid  
plate so that the first rigid plate is held against the first  
5 rigid portion.

12. The generator set assembly of claim 7, wherein the  
further component includes a shaft portion that extends out of  
the overall channel beyond a surface of the second rigid  
portion and additionally includes a protrusion extending  
5 radially outward from a central axis of the shaft portion

beyond an outer diameter of the shaft portion and further beyond an inner diameter of the overall channel.

13. The generator set assembly of claim 12, wherein the protrusion is positioned along the shaft portion at a location beyond the surface so that a limited amount of movement of the first and second rigid portions toward and away from one another can be accommodated by the intermediate flexible portion, wherein the first and second rigid portions have moved apart from one another by a maximum amount when the surface of the second rigid portion encounters the protrusion.

14. The generator set assembly of claim 13, wherein the protrusion is a washer positioned onto the shaft portion against a sleeve extending along the shaft portion and into the overall channel, the washer being held against the sleeve by way of an additional nut.

15. The generator set assembly of claim 13, wherein the protrusion is integrally formed with the shaft portion of the further component, wherein the further component extends into a cavity within the second rigid portion.

16. The generator set assembly of claim 13, wherein the second rigid portion is precluded from moving beyond the maximum amount away from the first rigid portion by the protrusion even when the flexible intermediate portion is unable to provide additional resistance to movement beyond the maximum amount.

17. A mounting component for mounting an engine onto a base, the mounting component comprising:

a first rigid portion capable of being fixedly coupled to the engine;

5 a second rigid portion capable of being fixedly coupled to the base;

an intermediate portion coupled between the first and second rigid portions, wherein the intermediate portion is formed at least in part from a flexible material so that the  
10 intermediate portion is capable of allowing relative movement of the first and second rigid portions; and

an additional component coupled to one of the first and second rigid portions and extending through the intermediate portion and through at least a portion of the other of the  
15 first and second rigid portions and beyond a surface of the other rigid portion,

wherein the additional component is capable of interacting with at least one of the intermediate portion and the other rigid portion so that at least one of relative  
20 shearing movement between the first and second rigid portions and relative movement of the first and second rigid portions apart from one another is limited.

18. The mounting component of claim 17, wherein each of the intermediate portion and the other rigid portion includes a respective channel portion that together form a channel having an inner diameter, and wherein the additional component  
5 includes a shaft extending through the channel and having an outer diameter that is less than the inner diameter, so that the relative shearing movement of the first and second rigid portions can be accommodated by the intermediate portion up to a point at which the shaft encounters the channel.

19. The mounting component of claim 18, wherein the additional component includes a means for restricting movement of the other rigid portion away from the one rigid portion.

20. A method of mounting an engine of a generator set to a base so that the engine can expand and contract during operation as a temperature of the engine changes without producing excessive stresses upon mounting components

5 supporting the engine with respect to the base, the method comprising:

providing a mounting component having first and second rigid components attached on opposite sides of a flexible intermediate component, and further having an additional component extending from the one of the first and second rigid components through a channel within the intermediate component and at least a portion of the other of the first and second rigid components, the additional component extending beyond a surface of the other rigid component and having a shaft that  
10 extends through the channel and has an outer diameter that is less than an inner diameter of the channel;

fixedly coupling the second rigid component to the base;  
and

fixedly coupling the first rigid component to the engine.

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21. The method of claim 20, wherein the additional component includes a protrusion at a location on the shaft that is beyond the surface, wherein the protrusion extends outward from the shaft beyond the inner diameter, and wherein the  
5 protrusion limits movement of the rigid components apart from one another.